

REMARKS

Reconsideration of this patent application is respectfully requested in view of the following remarks.

The Applicant comments upon the prior art rejection of the claims as follows.

The present invention is directed to an electronic control system for aggregates generating compressed air and vacuum, with programmable electronic circuits for controlling, regulating and monitoring the technical functions of such aggregates, in particular the functions of the compressed air generator or of the vacuum pump and of the associated drives, as well as of the treatment of the compressed air, wherein the electronic control system is configured as a standardized control system for employment in a multitude of different aggregates for generating compressed air or vacuum, and has an industrial PC or industrial microcomputer monitored and controlled by an operating system and comprising one or a plurality of microprocessors and a central data memory containing at least controlling and regulating software and a multitude of aggregate-specific data profiles in a recallable manner, said data profiles comprising the data

belonging to the aggregates and their components with respect to the controlling and regulating algorithms, and/or the controlling parameters, and/or the regulating parameters, and/or the technical characteristics and limit values, and/or the aggregate-specific occupancy of the inputs and outputs.

The object of the present invention is to provide a control that is constant on the hardware side and is adaptable for different units of compressed air or vacuum production solely by means of loading different software-based data profiles, and/or applies different regulation characteristics to them.

The cited prior art reference according to *Arcaini (U.S. Patent No. 5,992,776)* discloses a plant for ash recycling. This requires pneumatic energy in the form of vacuum or compressed air, for which purpose corresponding compressors (340) and vacuum pumps (320) are provided. The patent mentions these units only as an aside, and does not discuss their individual controls. It cannot be derived from this reference that the control (400) of the recycling plant has any influence on the compressor and/or the vacuum pump at all. Thus, it is described in column 6, line 42 ff., that the control (400) merely controls the frequency of the VFD (80) or that of the input conveyor (1), respectively. A

control of the compressor or the vacuum pump is not described here. Also, no control commands that act on the vacuum system (320) or on the compressor (340) are evident in the block schematic of FIG. 6. The present invention is implemented essentially in software. The words "software" or "program" do not occur in the *Arcaini* reference.

More particularly, the *Arcaini* reference in column 1, lines 6 to 10, discloses a process of recycling ash and other combustion process residue from a municipal waste combustor (MWC); and particular to the process for handling and removing both ferrous and non-ferrous metals and unburned material.

Arcaini also discloses in column 1, lines 24 to 37, that there is provided a system for the processing and recovery of material contained in an input ash stream from a municipal waste mass burn incinerator including sorting means for sorting material in the ash stream by size into a first and second faction. The first faction includes material of a first size of three inches or greater; the second faction includes material smaller than the first size. The system comprises size reduction means for comminuting material in the ash stream in the first faction to a size less than the first size and thereafter adding

the first faction to the second faction for further processing and recovery. The means for size reduction includes a shredder for cutting material into a predetermined size as established by the shredder.

Furthermore, *Arcaini*, in column 2 line 61 to column 3, line 16, discloses processes for the processing and recycling of ash and other combustion process residues provided as an output from a mass burn municipal waste combustor (MWC) that receives municipal solid waste inputs from regional waste sheds. The following description is an illustration of the basic process technology of *Arcaini*.

The MWC ash is delivered to the material staging area located inside the site building. The feed material is conveyed to initial screening which separates the combined ash into multiple size gradations for further processing. Based on experience, the typical MWC ash stream from a mass-burn facility consists of 10-12% ferrous metals, 0.5-1.5% recoverable non-ferrous metals including aluminum, copper, brass and coins, 2-8% unburned materials, and residual ash material. The process recovers over 95% ferrous and non-ferrous metals and incorporates a multi-chamber air classifier for the removal of unburned

material which typically consist of paper, plastic and wood fragments. Unburned materials are returned to the generating MWC for recombustion.

In the present invention, it is not simply a matter of controlling a compressor or a vacuum pump with a computer. This has been the state of the art for many years. Instead, the present invention lies in proposing a universal hardware solution that can be used in different units from different performance classes, for different applications. It also cannot be derived from the *Arcaini* reference that the control (400) could also be used in other units, outside of the ash recycling plant.


Also, the object of the claim relates to a control that merely takes over control of a unit once the unit-specific data profile has been loaded, in each instance. The control according to the present invention, however, can in turn be monitored by a higher-ranking guidance system, as is presented in FIG. 1 of the patent application. Thus, while the "controller 400" according to *Arcaini* is comparable with the "primary coordinating system of the user 26" according to the claimed invention, it is by no means comparable with the "electronic control system 4" on the "process level."

For all the reasons set forth above, the Arcaini prior art reference does not provide an identical disclosure of the claimed invention. Hence, the present invention is not anticipated under 35 U.S.C. 102. Withdrawal of this ground of rejection is respectfully requested.

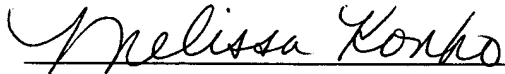
For all these reasons, all the claims are patentable under 35 U.S.C. 103 over all the prior art applied by the Patent Examiner. A prompt notification of allowability is respectfully requested.

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